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The Pretesting Effect
among Second and Fifth Grade Children

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Abstract

Can pretesting promote and improve the learning of texts among children? This was the main question we attempted to answer in the present study. A pretest is a test given to learners before learning the material. The learners try to answer the test, despite the high probability of error in most questions. Many studies that examined the effect of pretesting among adults have shown that a pre-learning test can serve as an effective tool to promote the learning of various materials, compared to an extended and repeated study of the same material. However, there are only few studies that examined the effect of the pretesting among children. So far studies have examined the effect of pretesting among children only in the context of word pairs with a weak associative link or trivia and general knowledge questions.

The main goal of the present study was to examine the effect of pretesting on text learning among primary school age children. This study was the first to examine the effect of pretesting on text learning among children and to do so in field conditions within the participants' school and classrooms. The underlying assumption of this study was that, as pretesting promotes learning and improves performance on a criterion test among adults, pretesting will serve as an effective strategy for promoting learning and improving criterion test performance among children. Another goal was to examine whether there were developmental differences and children of different ages were differently affected by pretesting. The results of the present study may have important implications for the field of education, as they may indicate that pretests can serve as an effective strategy for text learning, that can be easily implemented within the school curriculum. Alternatively, the results of this study may point to the limitations of implementing such strategy with children, especially with young children in the "First Reading" phase.

The study included 186 participants in second and fifth grades from a Hebrew-speaking school in central Israel. These age groups were selected for the research due to the difference between them in reading abilities and the use of advanced learning

strategies and skills to promote learning. In the study, participants studied two texts in one of two groups: The Extended Learning Group - read the text over a given period of time. The Pretesting Group - was tested on the text before reading it, and then read the text. At the end of the learning phase, participants from both groups were tested on the texts in a criterion test.

The findings of this study suggested that in the criterion test, the extended learning group achieved better results than the pretesting group. This finding was obtained for all the measures examined, in particular for the percentage of overall correct answers, and for the percentage of correct answers to new questions and repeated questions, open questions and multiple-choice questions, separately, in both the first text and the second text. In addition, no developmental differences between second and fifth graders were observed in the effect of pretesting (as opposed to extended learning) on the results. The findings of present study suggest that, contrary to the findings of the studies conducted with adults, pretesting did not help children and even impaired their learning, in both second grade and fifth grade.

Several explanations can be offered for the results of this study. First, previous studies suggested that the advantage of the pretest (among adults) is that it stimulates relevant prior knowledge related to the material learned later, and this link strengthens learning. Accordingly, it is possible that children had little prior knowledge of the subjects studied (if any), so they found it difficult to benefit from pretesting. Second, primary school age children are rarely tested on memory for texts they have read and studied (as they were required to do in this study), and may therefore had difficulty benefiting from pretesting. Furthermore, it is possible that completing the complex task in a group setting under relatively natural conditions created a cognitive load which hindered participants' ability to invest significant cognitive resources when completing the pretest. Finally, the strategy was new and unfamiliar to the participants, and because of the skill load required to complete the experimental task, they might have failed to harness the pretesting to promote their learning. Learning and familiarizing with the

strategy may lead children to use it more effectively and to better subsequent performance on the criterion test.

In conclusion, the findings of the present study revealed that no benefit was found in learning texts by pretesting, compared with extended learning, among children in second and fifth grades. This finding is in contrast to the "pretesting effect" found in previous studies among adults, and even among children in simpler learning tasks. Nevertheless, the findings of the present study point to the importance of continuing and deepening the research on pretesting in other contexts and domains which children learn and experience when learning in schools. In addition, it is necessary to examine the age in which pretesting becomes a significant factor that promotes learning.